



PATENT
Attorney Docket No.: HARRIS-00201

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

David M. Harris, PhD.

Serial No.: 10/661,261

Filed: September 11, 2003

For: **PERIODONTAL LASER AND
METHODS**

) Group Art Unit: 3739

) Examiner:

) **TRANSMITTAL LETTER**

) 162 N. Wolfe Road
) Sunnyvale, CA 94086
) (408) 530-9700

) Customer No. 28960

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed please find a Information Disclosure Statement, and Form PTO-1449, including copies of the references contained thereon, for filing in the U.S. Patent and Trademark Office.

The Commissioner is hereby authorized to charge any additional fee or credit any overpayment to our Deposit Account No. 08-1275. **An originally executed duplicate of this transmittal is enclosed for this purpose.**

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: 1/15/2004

By: 

James A. Gavney

Reg. No.: 45,687

Attorney for Applicant

CERTIFICATE OF MAILING (37 CFR § 1.8(a))

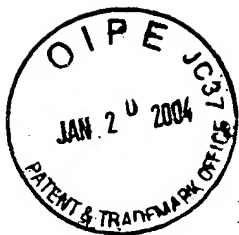
I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450

- 1 -

HAVERSTOCK & OWENS LLP.

Date: 1-15-04

By: 



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Sir:

The citations listed below, copies attached, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

Applicant has become aware of the following printed publications which may be material to the examination of this application:

- U.S. Patent No.: 4,764,114;
- U.S. Patent No.: 4,877,401;
- U.S. Patent No.: 5,055,048;
- U.S. Patent No.: 5,090,908;
- U.S. Patent No.: 5,171,148;
- U.S. Patent No.: 5,194,005;
- U.S. Patent No.: 5,230,621;
- U.S. Patent No.: 5,328,365;
- U.S. Patent No.: 5,342,198;
- U.S. Patent No.: 5,374,266;
- U.S. Patent No.: 5,401,171;

- U.S. Patent No.: 5,435,724;
- U.S. Patent No.: 5,456,603;
- U.S. Patent No.: 5,549,596;
- U.S. Patent No.: 5,595,568;
- U.S. Patent No.: 5,611,793;
- U.S. Patent No.: 5,616,140;
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- U.S. Patent No.: 5,631,228;
- U.S. Patent No.: 5,642,997;
- U.S. Patent No.: 5,646,119;
- U.S. Patent No.: 5,658,148;
- U.S. Patent No.: 5,759,200;
- U.S. Patent No.: 5,766,214;
- U.S. Patent No.: 5,795,153;
- U.S. Patent No.: 5,836,999;
- U.S. Patent No.: 5,885,082;
- U.S. Patent No.: 5,885,965;
- U.S. Patent No.: 5,897,509;
- U.S. Patent No.: 5,912,230;
- U.S. Patent No.: 5,915,161;
- U.S. Patent No.: 6,019,605;
- U.S. Patent No.: 6,129,721;
- U.S. Patent No.: 6,153,210;
- U.S. Patent No.: 6,179,830 B1;
- U.S. Patent No.: 6,267,771 B1;
- Y. Ben Hatit et al., "The Effects of a Pulsed Nd: YAG Laser on Subgingival Bacterial Flora and on Cementum: An *in Vito* Study", Journal of Clinical Laser Medicine & Surgery, Vol. 14, Number 3, 1996, pp. 137-143;
- Y. Chan et al., "Bactericidal action of Nd: YAG laser radiation in periodontal pockets", The 4th International Congress on Lasers in Dentistry, Singapore August 6-10 1994, pp. 185-190;
- Coffelt DW et al., "Determination of energy density threshold for laser ablation of bacteria- An in vitro study", J. Clin Periodontology 1997, 24: 1-7;

- D. N. Dederich et al., "Comparative Bactericidal Exposures for Selected oral Bacteria Using Carbon Dioxide Laser Radiation", Laser in Surgery and Medicine, 1990, pp. 10:591-594;
- D. N. Dederich et al., "Scanning Electron Microscopic Analysis of Canal Wall Dentin following Neodymium-Yttrium-Aluminum Garnet Laser Irradiation", "Analisis con SEM de la Pared Dentinaria del Conductor Luego de la Irradiacion con Laser Nd-YAG", Journal of Endodontics, Vol. 10, No. 9, September 1984;
- S. R. Epstein, "Curettage Revisited: Laser Therapy", Vol. 4, No. 2, pp. 27-32;
- Gold S.I. et al., "Pulsed Laser Beam Effects on Gingiva", J. Clin. Periodontal 1994, pp. 21: 391-396;
- N. Gutknecht et al., "Bactericidal Effect of the Nd:YAG Laser in *in Vitro* Root Canals", Journal of Clinical Laser Medicine & Surgery, Vol. 14, Number 2, 1996, pp. 77-80;
- N. Gutknecht et al., "Bactericidal Effect of the Nd:YAG Lasers in Laser Supported Curettage", SPIE Vol. 2973, February 8-9 1997, pp. 221-226;
- M. W. Hardee et al., "Evaluation of the Antibacterial Effects of Intracanal Nd:YAG Laser Irradiation", Journal of Endodontics, Vol. 20, No. 8, August 1994, pp. 377-380;
- T. Klinke et al., "Antibacterial Effects of Nd:YAG Laser Irradiation within Root Canal Dentin", Journal of Clinical Laser Medicine & Surgery, Vol. 15, November 1, 1997, pp. 29-31;
- P.P. Lin et al., "A Comparative Effect of the Nd:YAG Laser with Root Planing on Subgingival Anaerobes in Periodontal Pockets", The Institute for Laser Dentistry, 1 page;
- A. Moritz et al., "Bacterial Reduction in Periodontal Pockets Through Irradiation with a Diode Laser: A Pilot Study", Journal of Clinical Laser Medicine & Surgery, Vol. 15, Number 1, 1997, pp. 33-37;
- A. Moritz et al., "Morphologic Changes Correlating to Different Sensitivities of Escherichia Coli and Enterococcus Faecalis to Nd:YAG Laser Irradiation Through Dentin", Laser in Surgery and Medicine, 2000, pp. 26: 250-261;
- A. Moritz et al., "Treatment of Periodontal Pockets with a Diode Laser", Lasers in Surgery and Medicine, 1998, pp. 22:302-311;

- L. O. Ramskold et al., "Thermal Effects and Antibacterial Properties of Energy Levels Required to Sterilize Stained Root Canals with an Nd:YAG Laser", Journal of Endodontics, Vol. 23, No. 2, February 1997, pp. 96-100;
- R. J. Schultz et al., "Bactericidal Effects of the Neodymium:YAG Laser: In Vitro Study", Lasers in Surgery and Medicine, 1986, pp. 6:445-448;
 - P. Spencer et al., "Chemical Characterization of Lased Root Surfaces Using Fourier Transform Infrared Photoacoustic Spectroscopy", J. of Periodontal, July 1992, 633-636;
 - T. D. Rapley et al., "Effects of the Nd:YAG Laser and Combined Treatments on in Vitro Fibroblast Attachment to Root Surfaces", J. Clin. Periodontal 1994, pp. 21: 38-44;
 - D. J. Trylovich et al., "The Effects of the Nd:YAG Laser on in Vitro Fibroblast Attachment to Endotoxin-Treated Root Surfaces", J. of Periodontal, Vol. 63, Number 7, July 1992, pp. 626-632;
 - P. Tseng et al., "The Bactericidal Effect of Nd-YAG Laser Preliminary *in vitro* Studies", Periodontology, Vol. 13, Number 1, pp. 13:20-25;
 - J. M. White et al., "Use of the Pulsed Nd:YAG Laser for Intraoral Soft Tissue Surgery", Laser in Surgery and Medicine, 1991, pp. 11:455-461;
 - J. M. White et al., "Sterilization of Teeth by Gamma Radiation", J. Dent. Res. 73(9), September 1994, pp: 1560-1567;
 - C. J. Whitters et al., "The Bactericidal Activity of Pulsed Nd:YAG Laser Radiation in Vitro", Lasers in Medical Science, December 1994, Vol, 9, pp. 9:297-303; and
 - Y. S. Kuru et al., "Effect of Gallium Arsenide Diode Laser on Human Periodontal Disease: a Microbiological and Clinical Study", Lasers Surg. Med. 2002, pp. 30(1): 60-6.

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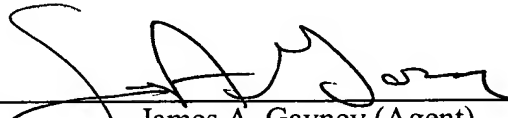
This Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that anyone or more of these citations constitutes prior art.

Respectfully submitted,
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James A. Gavney (Agent)
Reg. No.: 45,687
Attorneys for Applicant

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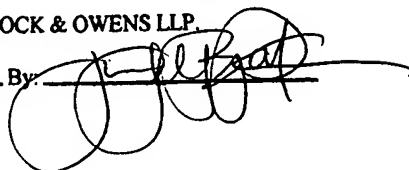
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FORM PTO-1449
(Modified)

JAN 20 2004

U.S. Department of Commerce
Patent and Trademark Office

Attorney Docket No.: HARRIS-00201

Serial No.: 10/661,261

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use Several Sheets If Necessary)

Applicant: David M. Harris

Filing Date: September 11, 2003

Group Art Unit: 3739

(37 CFR § 1.98(b))

U.S. PATENT DOCUMENTS

Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
	AA	4,764,114	08/16/88	Jeffcoat et al.	433	72	01/13/86
	AB	4,877,401	10/31/89	Higuchi et al.	433	215	03/09/88
	AC	5,055,048	10/08/91	Vassiliadis et al.	433	215	03/15/90
	AD	5,090,908	02/25/92	Teumim-Stone	433	215	07/06/89
	AE	5,171,148	12/15/92	Wasserman et al.	433	215	06/30/89
	AF	5,194,005	03/16/93	Levy	433	215	05/15/89
	AG	5,230,621	07/27/93	Jacoby	433	29	12/26/91
	AH	5,328,365	07/12/94	Jacoby	433	29	04/09/93
	AI	5,342,198	08/30/94	Vassiliadis et al.	433	215	05/10/93
	AJ	5,374,266	12/20/94	Kataoka et al.	606	15	11/25/92
	AK	5,401,171	03/28/95	Paghdiwala	433	215	07/20/92
	AL	5,435,724	07/25/95	Goodman et al.	433	215	07/06/94
	AM	5,456,603	10/10/95	Kowalyk et al.	433	215	11/01/93
	AN	5,549,596	08/27/96	Latina	606	4	10/20/95
	AO	5,595,568	10/21/97	Anderson et al.	606	9	02/01/95
	AP	5,611,793	03/18/97	Wilson et al.	606	2	04/30/93
	AQ	5,616,140	04/01/97	Prescott	606	10	03/21/94
	AR	5,616,141	04/01/97	Cipolla	606	15	01/11/96
	AS	5,631,228	05/20/97	Oppenheim et al.	514	12	06/07/95
	AT	5,642,997	07/01/97	Gregg, II et al.	433	215	02/01/96
	AU	5,646,119	07/08/97	Oppenheim et al.	514	12	06/07/95
	AV	5,658,148	08/19/97	Neuberger et al.	433	215	04/26/95
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	AX	5,766,214	06/16/98	Mehl, Sr. et al.	606	9	04/18/96
	AY	5,795,153	08/18/98	Rechmann	433	216	11/29/94
	AZ	5,836,999	11/17/98	Eckhouse et al.	607	88	09/28/95
	BA	5,885,082	03/23/99	Levy	433	215	06/03/91
	BB	5,885,965	03/23/99	Oppenheim et al.	514	12	06/07/96
	BC	5,897,509	04/27/99	Toda et al.	600	589	06/23/97
	BD	5,912,230	06/15/99	Oppenheim et al.	514	12	06/07/96
	BE	5,915,161	06/22/99	Adams	422	186.3	09/25/95
	BF	6,019,605	02/01/00	Myers	433	215	08/18/98
	BG	6,129,721	10/10/00	Kataoka et al.	606	2	06/02/98
	BH	6,153,210	11/28/00	Roberts et al.	424	411	08/14/97

Examiner:

Date Considered:

EXAMINER:

Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: HARRIS-00201	Serial No.: 10/661,261		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)				Applicant: David M. Harris			
(37 CFR § 1.98(b))				Filing Date: September 11, 2003	Group Art Unit: 3739		
U.S. PATENT DOCUMENTS							
Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
	BI	6,179,830 B1	01/30/01	Kokubu	606	16	07/22/97
	BJ	6,267,771 B1	07/31/01	Tankovich et al.	606	131	02/27/96
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)							
	BK	Y. Ben Hatit et al., "The Effects of a Pulsed Nd: YAG Laser on Subgingival Bacterial Flora and on Cementum: <i>Arin Vito</i> Study", Journal of Clinical Laser Medicine & Surgery, Vol. 14, Number 3, 1996, pp. 137-143.					
	BL	Y. Chan et al., "Bactericidal action of Nd: YAG laser radiation in periodontal pockets", The 4 th International Congress on Lasers in Dentistry, Singapore August 6-10 1994, pp. 185-190.					
	BM	Coffelt DW et al., "Determination of energy density threshold for laser ablation of bacteria- An in vitro study", J. Clin Periodontology 1997, 24: 1-7.					
	BN	D. N. Dederich et al., "Comparative Bactericidal Exposures for Selected oral Bacteria Using Carbon Dioxide Laser Radiation", Laser in Surgery and Medicine, 1990, pp. 10:591-594.					
	BO	D. N. Dederich et al., "Scanning Electron Microscopic Analysis of Canal Wall Dentin following Neodymium-Yttrium-Aluminum Garnet Laser Irradiation", "Analisis con SEM de la Pared Dentinaria del Conductor Luego de la Irradiacion con Laser Nd-YAG", Journal of Endodontics, Vol. 10, No. 9, September 1984.					
	BP	S. R. Epstein, "Curettage Revisited: Laser Therapy", Vol. 4, No. 2, pp. 27-32.					
	BQ	Gold S.I. et al., "Pulsed Laser Beam Effects on Gingiva", J. Clin. Periodontal 1994, pp. 21: 391-396.					
	BR	N. Gutknecht et al., "Bactericidal Effect of the Nd:YAG Laser <i>in in Vitro</i> Root Canals", Journal of Clinical Laser Medicine & Surgery, Vol. 14, Number 2, 1996, pp. 77-80.					
	BS	N. Gutknecht et al., "Bactericidal Effect of the Nd:YAG Lasers in Laser Supported Curettage", SPIE Vol. 2973, February 8-9 1997, pp. 221-226.					
	BT	M. W. Hardee et al., "Evaluation of the Antibacterial Effects of Intracanal Nd:YAG Laser Irradiation", Journal of Endodontics, Vol. 20, No. 8, August 1994, pp. 377-380.					
	BU	T. Klinken et al., "Antibacterial Effects of Nd:YAG Laser Irradiation within Root Canal Dentin", Journal of Clinical Laser Medicine & Surgery, Vol. 15, November 1, 1997, pp. 29-31.					
	BV	P.P. Lin et al., "A Comparative Effect of the Nd:YAG Laser with Root Planing on Subgingival Anaerobes in Periodontal Pockets", The Institute for Laser Dentistry, 1 page.					
	BW	A. Moritz et al., "Bacterial Reduction in Periodontal Pockets Through Irradiation with a Diode Laser: A Pilot Study", Journal of Clinical Laser Medicine & Surgery, Vol. 15, Number 1, 1997, pp. 33-37.					
	BX	A. Moritz et al., "Morphologic Changes Correlating to Different Sensitivities of Escherichia Coli and Enterococcus Faecalis to Nd:YAG Laser Irradiation Through Dentin", Laser in Surgery and Medicine, 2000, pp. 26: 250-261.					
	BY	A. Moritz et al., "Treatment of Periodontal Pockets with a Diode Laser", Lasers in Surgery and Medicine, 1998, pp. 22:302-311.					
	BZ	L. O. Ramskold et al., "Thermal Effects and Antibacterial Properties of Energy Levels Required to Sterilize Stained Root Canals with an ND:YAG Laser", Journal of Endodontics, Vol. 23, No. 2, February 1997, pp. 96-100.					
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	CB	P. Spencer et al., "Chemical Characterization of Lased Root Surfaces Using Fourier Transform Infrared Photoacoustic Spectroscopy", J. of Periodontal, July 1992, 633-636.					
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	CD	D. J. Trylovich et al., "The Effects of the Nd:YAG Laser on in Vitro Fibroblast Attachment to Endotoxin-Treated Root Surfaces", J. of Periodontal, Vol. 63, Number 7, July 1992, pp. 626-632.					
	CE	P. Tseng et al., "The Bactericidal Effect of Nd-YAG Laser Preliminary <i>in vitro</i> Studies", Periodontology, Vol. 13, Number 1, pp. 13:20-25.					
	CF	J. M. White et al., "Use of the Pulsed Nd:YAG Laser for Intraoral Soft Tissue Surgery", Laser in Surgery and Medicine, 1991, pp. 11:455-461.					
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